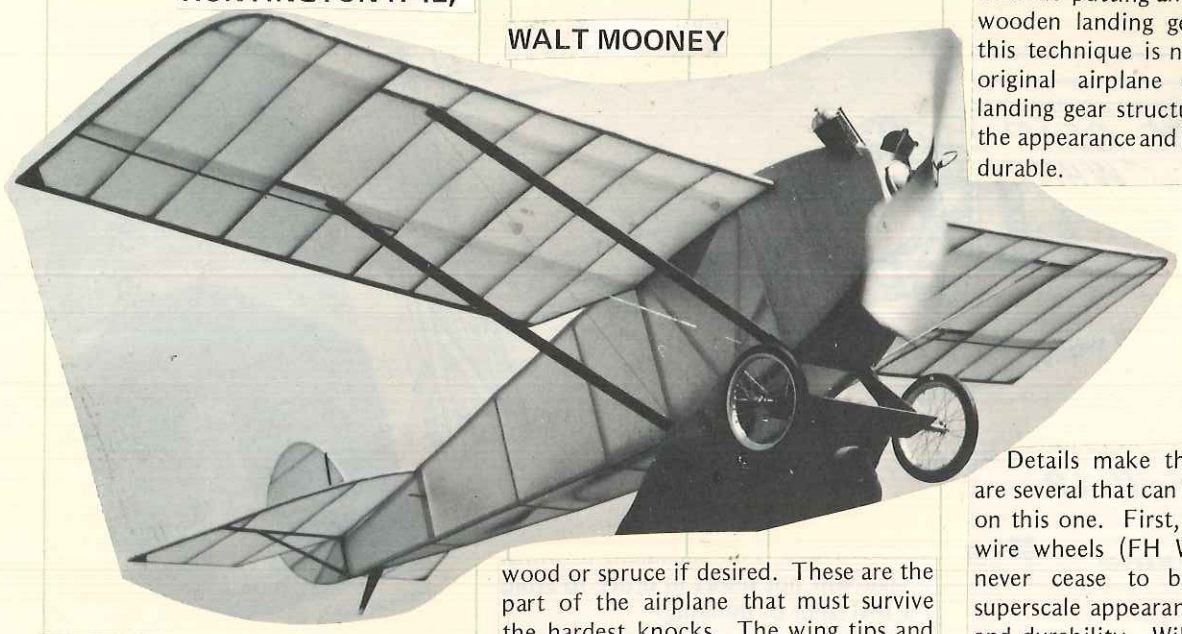
HUNTINGTON H-12,

WALT MOONEY



●This is a model of one of the first homebuilt airplanes in the U.S.A. Not that all the first airplanes weren't really built at home, but this was designed after WWI and was actually intended to be built by amateurs. It used a two cylinder "V" type engine, undoubtedly out of a motorcycle. It was truly an attempt to obtain an airplane for a minimum first cost.

As a consequence of this effort it was built very simply and therefore makes a simple model. We have once again designed the model in a larger size, but in a format that will be reduced in the magazine to a full size PEANUT SCALE plan. You are therefore free to build a peanut Huntington H-12 from the magazine plans, or for a nominal price, you can purchase larger plans from the Model Builder Plan Service.

Both sizes of the Huntington have been built and both fly well. However, it would be dishonest to claim that the model wasn't tailheavy. Before it would perform a stable flight pattern it had to be ballasted to the CG shown on the plans and in addition, it was necessary to add the up elevator shown in phantom on the plans and in the photos. With these adjustments it was obvious that the nose of the model could have been made stronger and heavier, so the plans were drawn this way. One side benefit from this modification is that a block nose as shown is easier than bending the longerons for the former built-up front end.

Construction of this model is as simple as a little box fuselage monoplane can be. Try to keep the model as light as possible while still retaining adequate strength. Most of the balsa should be medium for the sticks. The leading edges of the wings should be hard balsa or even bass wood or spruce if desired. These are the part of the airplane that must survive the hardest knocks. The wing tips and the tail outlines were laminated. Use .012 by 1/32nd basswood. Three layers were used around the tail and five layers were used for the wing tips.

If you are a regular reader of this magazine you've read Fernando Ramos' articles extolling the virtues of the thin basswood strips that are available at model railroad supply stores. All I can add is to say that it's all true. These thin basswood strips laminate easily using white glue or Sigbond for the adhesive. The outlines for this model were wrapped around a line of pins pushed into the plans to form a guide for the correct shape. The pins must not be spaced more than about an eighth of an inch apart in the sharp bend areas, and waxed paper over the plan is a must to keep the laminations from sticking down. You can cut out a cardboard pattern to laminate around if preferred, using masking tape to hold the laminations to the form. This system has to be employed if you are using balsa wood for the laminations in the interest of lower weight, but with basswood in the thinner sections it isn't absolutely necessary.

Standard assembly methods are used everywhere else. Simply make the parts by pinning the outlines down over the plan and then cement the cross pieces or ribs in place. Don't omit the gussets in the corners of the surfaces. Without the gussets the tissue covering will wrinkle in the corners for sure when it is shrunk.

Use the covering technique outlined in last month's Peanut Scale article to cover this model.

Note that the landing gear wire is cemented into the fuselage but that it is not cemented to the landing gear struts nor to the landing gear cross axle. This will allow the wire to flex under load without putting any of the load into the wooden landing gear structure. While this technique is not strictly scale, (the original airplane didn't have a wire landing gear structure), it hardly affects the appearance and is tremendously more durable.

Details make the model, and there are several that can be used to advantage on this one. First, Fulton Hungerford's wire wheels (FH Wheels) are used. I never cease to be amazed by their superscale appearance and their strength and durability. Williams Brothers' nose thrust button and cylinders are also used. The propeller on the large version is by Testors. The only way to get one that I know of is to buy one of their ready-to-fly models and wear it out . . . finally salvaging the prop for use on the Huntington. Any suitable plastic propeller is really OK.

Struts on the model shown were make of thin plywood and are thinner than those shown on the plans. If you use balsa for the struts, use hard balsa and stick to the plan thickness. The diagonal wire braces between the wing struts are made from 4 pound test monofiliment fishing leader.

The cockpit opening and side windows are simulated with blue tissue doped over the lighter fuselage covering. I don't know how they ever got away with that tiny windshield, but there it is, make it out of thin plastic.

An open cockpit model deserves a pilot. Mine was carved out of a piece of very lightweight styrene foam. This is used for packing radios and other delicate equipment, is fairly easy to come by and adds almost no weight to the model. The pilot is painted with plastic model paint and cemented to the model with white glue or epoxy. Regular dope or model cement will dissolve styrene.

The model in the photos flies nicely and will make perfect takeoffs and landings in a reasonably smooth area. It is powered with a single loop of 3/16th flat rubber 12 to 14 inches long, and requires about 1/16th of down thrust to keep the nose down under the initial power burst. It is adjusted to fly in wide left circles. Best time so far is only 30 seconds, but it's capable of much more under the right circumstances. ●

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